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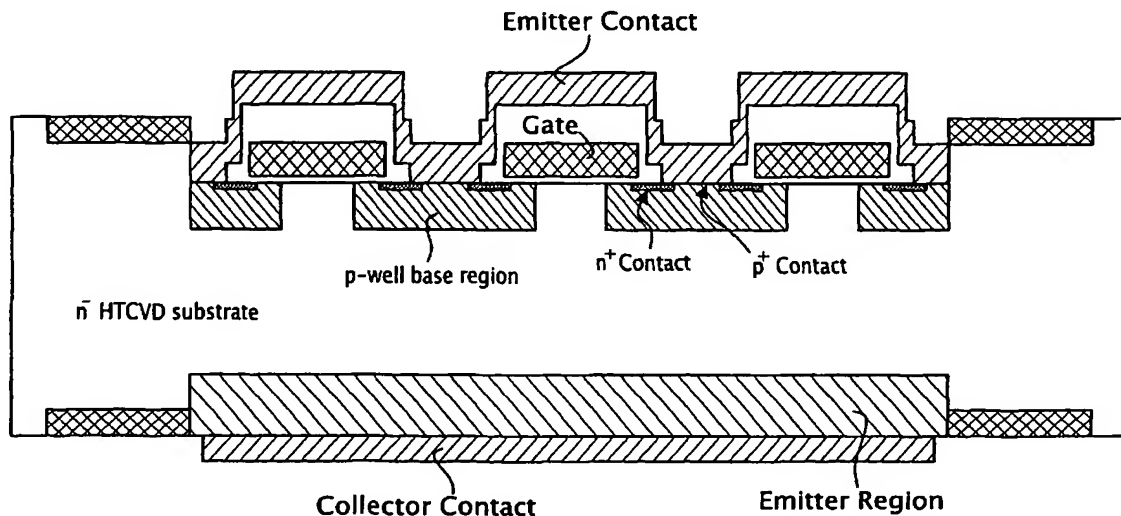
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(54) Title: LIGHTLY DOPED SILICON CARBIDE WAFER AND USE THEREOF IN HIGH POWER DEVICES



(57) **Abstract:** The first object of this invention is a method to fabricate SiC wafers from lightly doped n- or p-type crystals having a quality such that these wafers can be used as the base layer of high voltage power devices. This method enables a lower cost solution than the conventional CVD growth of a thick lightly doped layer on a low resistivity SiC substrate. The second object of the invention is a novel semiconductor structure able to block very high voltages. Instead of using a highly doped substrate, which in the case of a vertical power device represents an unnecessary additional resistance, the device of the invention uses a lightly doped wafer as n-drift zone.